

Studies in Laguna Beach Isopoda II B

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Tylos punctatus Holmes and Gay

(Fig. 6)

Locality—Found in the sand at Laguna Beach; on being alarmed they rolled up in a compact ball.

Color—Gray, spotted with white.

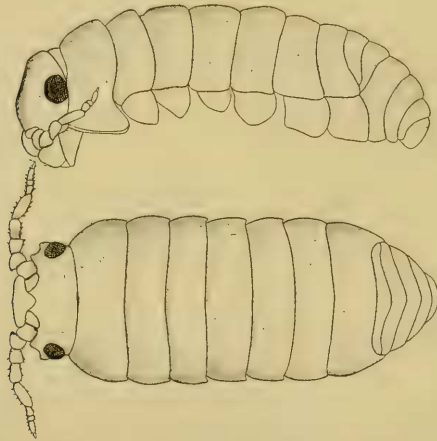


Figure 6. *Tylos punctatus* Holmes and Gay. Lateral and dorsal views.

Body oblong and very convex, manifesting very perfect ability to contract in the form of a ball. Covered with many minute spines. About twice as long as wide, 7 mm. by 3 mm. (measurements of a small specimen).

Head with lateral lobes produced into triangular projections in front of eyes. Eyes round and composite, situated post-laterally. First antennæ rudimentary, scale like. Second antennæ has peduncle of five articles: first three broad; first and

second subequal in length; second slightly shorter and has sharp projection on proximal inner angle. Fourth and fifth long and narrower; fifth, one and a third times longer than fourth. Flagellum composed of two short articles, a third equal to one and two, and a fourth short and conical. Antennæ profusely covered with spines. Extend scarcely to end of first thoracic segment.

Thoracic segments subequal: first slightly longer than those succeeding. Sutures of epimera distinct on all but first segment where epimera are indicated by a thickened margin. Epimera produced posteriorly and rounded. Legs ambulatory, all similar, very thickly spined. First leg has segments broader than those of following legs; first segment has a triangular process on exterior distal margin.

Abdomen composed of six segments. First two have lateral margins covered by seventh thoracic segment. Third broad, articulating with epimera of seventh thoracic segment on lateral margin, fourth rounded on lateral margin, slightly produced posteriorly as also the fifth which, however, is shorter and narrower. Sixth is truncate, short and broad. Uropoda have become opercular valves and have a short setose terminal joint.

Janira occidentalis Walker

(Fig. 7)

Locality—Large kelp holdfast from deep water, at Laguna Beach, Cal.

Color—White tinged with green and orange, finely spotted with brown; legs white.

Body about three times longer than wide, 6 mm. by 2 mm. Oblong, depressed along lateral margins. Slightly convexed on median line.

Head twice as wide as long, anterior margin not straight but produced into a slight median lobe; antero-lateral angles marked. Eyes large, round, composite and subdorsal in position. First antenna has first article of peduncle large, broad and long. Second and third subequal and much narrower than first. Fla-

gellum composed of twelve articles. Second antenna has first two articles subequal; third slightly larger, provided with antennal scale; fourth narrower and shorter than third; fifth and sixth long and narrow; sixth longer than fifth; flagellum multi-articulate. Maxillipeds with palp of five articles; first three subequal in width; fourth and fifth about half as wide. Mandible has a palp of three articles.

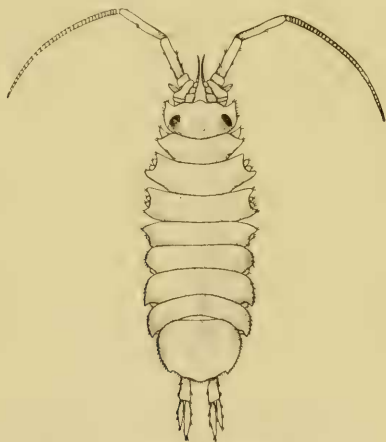


Figure 7. *Janira occidentalis* Walker.

Thoracic segments subequal in length. First segment of thorax has post-lateral angles rounded and prominent. Epimeral lobe occupies antero-lateral angles. Second and third segments have both antero- and post-lateral lobes with bilobate epimera between. Fourth segment has antero-lateral lobe prominent and rounded, post-lateral less prominent; single-lobed epimera between. Fifth similar to fourth with antero-lateral lobe much more rounded and conspicuous. Sixth and seventh have antero-lateral lobe very prominent and produced sharply at posterior extremity; post-lateral lobe obsolete, its place occupied by epimera. First pair of legs prehensile, remaining ambulatory

with bi-unguiculate dactyli. First leg has toothed propodus for half the proximal distance.

Abdomen composed of one large segment, possibly a very small anterior one though the suture was not distinct enough to make this certain. Telson is produced at post-lateral angles into a short, sharp point. Median part forms a rounded lobe. Uropoda composed of a peduncle about three times as long as inner ramus. Outer ramus slightly shorter than inner ramus.

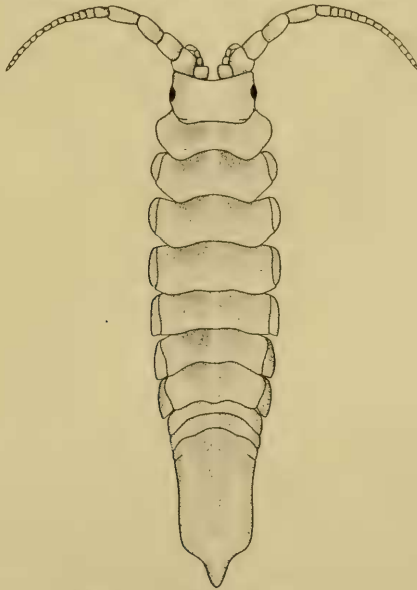


Figure 8. *Pentidotea aculeata* n. sp.

Pentidotea aculeata n. sp.

(Figs. 8, 9 and 10)

Locality—Low tide pools, Laguna Beach, California.

Color—Reddish brown in the male; female a more delicate pink with white spots along median line of back and two similar

rows of markings, each in a line half way between the median line and the lateral margin. Both male and female have all the segments and sutures outlined with a bright red line.

Body of male narrow and elongate and arched along median line. Length 23 mm., greatest width 6 mm., almost four times longer than wide.

Head about twice as wide as long, excavated on frontal margin with antero-lateral angles distinct but rounded. Posterior

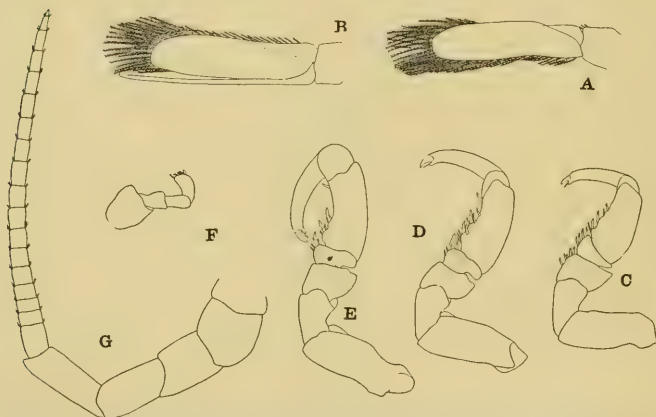


Figure 9. *Pentidotea aculeata* n. sp. A, first pleopod of male; B, second pleopod of male; C, first leg; D, second leg; E, seventh leg; F, first antenna; G, second antenna.

margin slightly concave with a short red mark extending horizontally from a post-lateral position. Eyes on lateral margin midway between anterior and posterior margins and almost round in shape. First antennæ possess four articles; first broad, almost as wide as long; following three articles not half as wide; second and third subequal; last clavate and slightly longer than the two preceding. First antennæ extend to end of second article of peduncle of second antennæ. Second antennæ have a peduncle of five articles: first short; second and third subequal, twice as

long as first; fourth not quite twice as long as third; fifth slightly longer than fourth; flagellum consists of seventeen or eighteen articles. Maxillipeds have a palp of five articles.

Sides of thorax almost parallel in male. All but first segment have epimera which extend to end of posterior margin. Epimera of second and third and fourth segments about equally wide from anterior to posterior margins. Fifth, sixth and seventh much narrower at anterior than at posterior margin. Legs alike in structure.

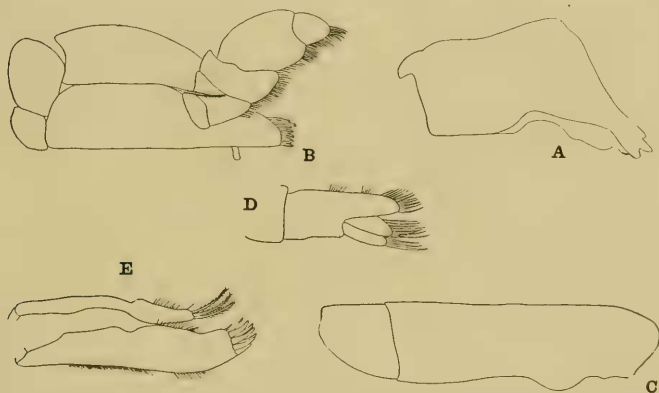


Figure 10. *Pentidotea aculeata* n. sp. A, mandible; B, maxilliped; C, opercular valve; D, second maxilla; E, first maxilla.

Abdomen 8 mm. long, 4 mm. wide at anterior end; composed of two short segments, a partially coalesced and a long terminal segment; the latter narrow and slightly excavate on the lateral margins, prolonged at median posterior extremity into a pronounced tooth, 1 mm. long. Post-lateral angles rounded. Opercular valves composed of a long anterior and a short posterior part. Carina not apparent on anterior portion.

The above description applies only to the male. Along with these a number of other specimens, all females, were collected which are slightly different in shape: have lateral margins less

parallel, more arched. They were lighter in color and more distinctly marked than the males. These differences are probably only sexual.

These specimens appear to lie close to *Pentidotca whitei* in many details, but in others are quite different. The male of *P. whitei* is described as being much larger—17 mm. by 34 mm.—and about three times as long as wide, whereas the male of these *Laguma* specimens is almost four times as long as wide. In *P. whitei* the epimeron of the second segment becomes narrower from the anterior to the posterior margin. Here the epimeral suture is practically vertical and the epimeron is about as wide anteriorly as posteriorly. The anterior margin of the head is more distinctly excavate and the antero-lateral angles more pronounced than in *P. whitei*. The eyes are about round, whereas in *P. whitei* they are twice as wide as long. The last abdominal segment is more elongate and the terminal process more pronounced than in *P. whitei*. It therefore seems evident that this isopod represents a new species.